

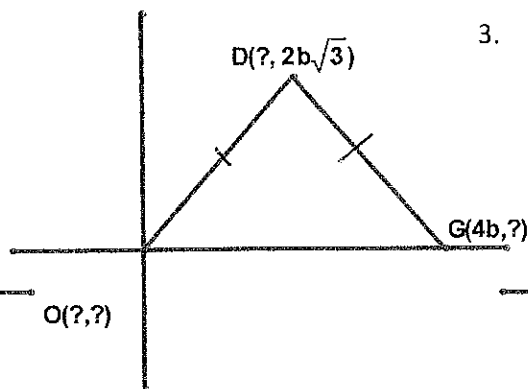
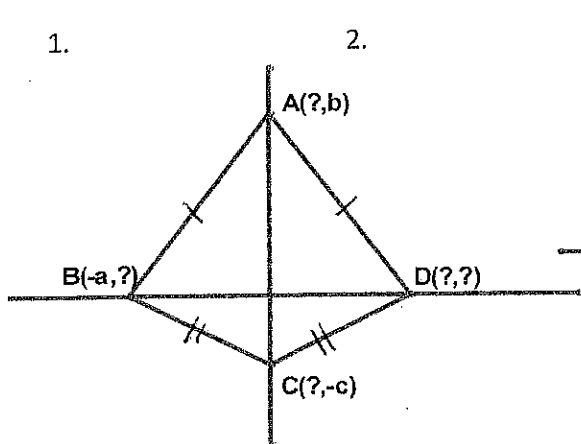
# 5.1 Coordinate Geometry WS

Name \_\_\_\_\_

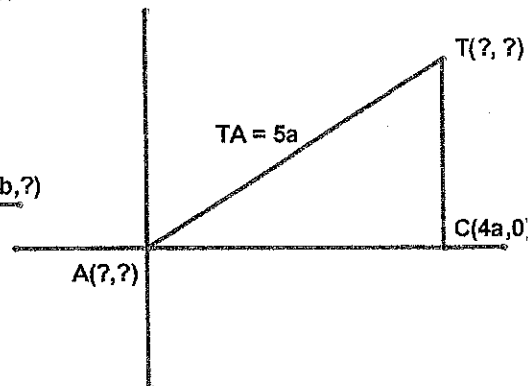
What are the coordinates of the following figures?

1.

2.



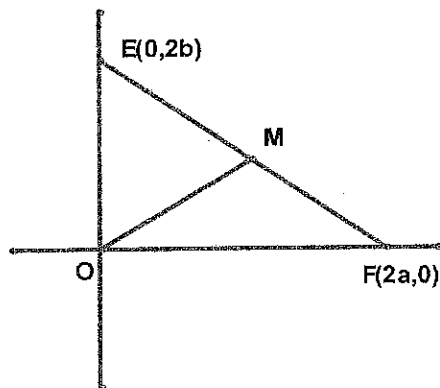
3.



4. Given:  $\triangle OEF$  is a right triangle.

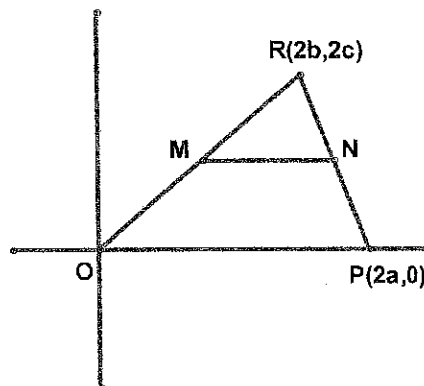
M is the midpoint of  $\overline{EF}$ .

Prove:  $EM = FM = OM$ .



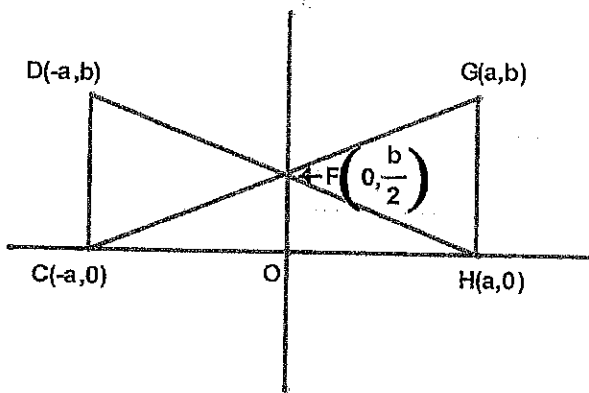
5. Given:  $\overline{MN}$  is the midsegment of  $\triangle ORP$

Prove:  $\overline{MN} \parallel \overline{OP}$ ,  $MN = \frac{1}{2} (OP)$



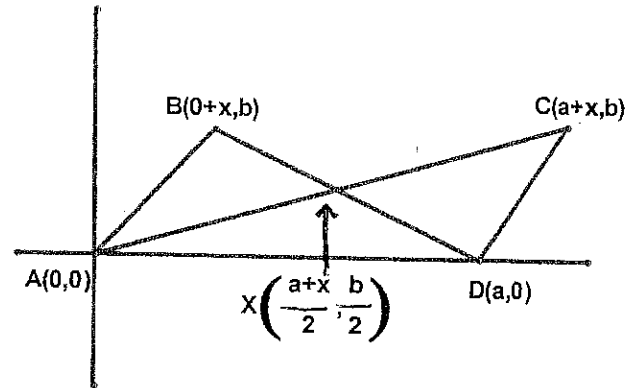
6. Given: diagram

Prove:  $\triangle FGH \cong \triangle FDC$

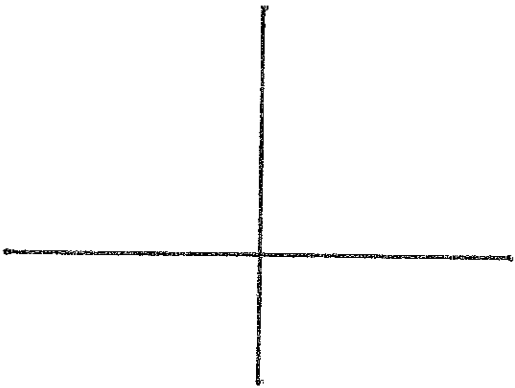


7. Given: diagram

Prove:  $\triangle ABX \cong \triangle CDX$

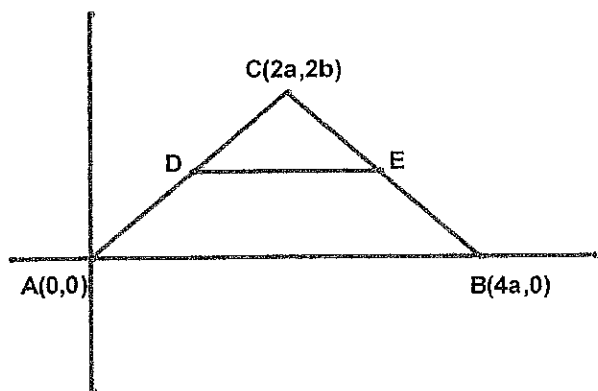


8. Write a coordinate proof for the statement: The measure of the segment that joins the vertex of the right angle in a right triangle to the midpoint of the hypotenuse is one-half the measure of the hypotenuse.



9. Given:  $\overline{DE}$  is the midsegment of isosceles  $\triangle ABC$ .

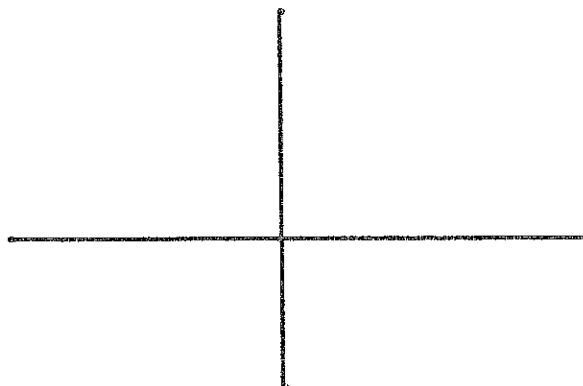
Prove:  $\overline{AD} \cong \overline{BE}$



10. Given:  $\triangle ABC$  is isosceles.

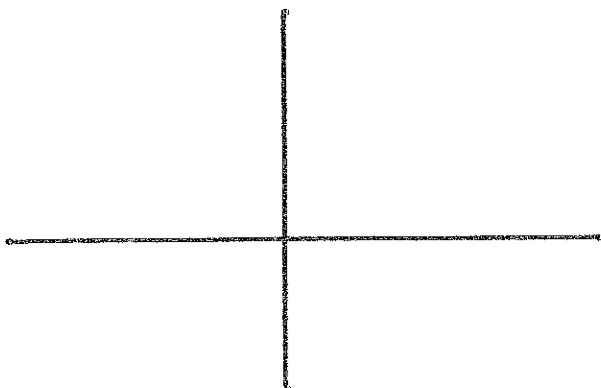
$\overline{DE}$ ,  $\overline{DF}$ , and  $\overline{EF}$  are midsegments of  $\triangle ABC$ .

Prove:  $\triangle DEF$  is isosceles. (Draw your own diagram!)



Draw  $\triangle XYZ$  and determine whether it is a right triangle.

11.  $X(0,0)$   $Y(2h,2h)$   $Z(4h,0)$



12.  $X(0,0)$   $Y(h,h)$   $Z(2h,0)$

